

Patent Abstracts of Japan

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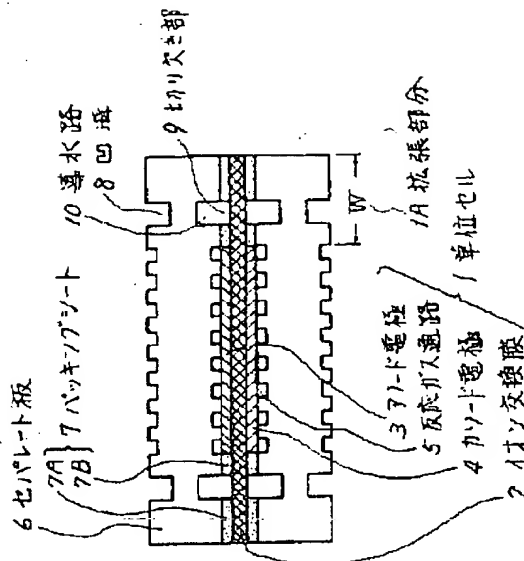
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TITLE : CELL STRUCTURE FOR SOLID
POLYMER ELECTROLYTE TYPE FUEL
CELL



ABSTRACT : PURPOSE: To simplify a device by feeding the cooling water to conduits provided with recessed grooves on the separate plates side and a packing sheet at expansion portions of an ion exchange film and the separate plates, hydrating the ion exchange film, and cooling a fuel cell.

CONSTITUTION: An ion exchange film 2 and separate plates 6 have expansion portions 1A with the width W on both sides of electrodes 3, 4, and recessed grooves 8 are provided in parallel with reaction gas passages 5. A packing sheet 7 with notch sections 9 is inserted between the plates 6 of the expansion portions 1A and the film 2, and the grooves 8 are brought into contact with the film 2 via the notch sections 9 to form conduits 10. A manifold is fitted on the side face of the entrance side of the passages 5 and conduits 10 in a cell stack having the conduit 10 for each unit cell 1, and the reaction gas such as the anode gas and cathode gas and water are fed and circulated. The water is brought into contact with the film 2 and removes the heat generated by power generation, the cell stack is sealed by the sheet 7 to prevent the leakage of the reaction gas to the conduits 10 side, and the device can be simplified.

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